SECTION III. OPERATION

14.3.1 INTRODUCTION

During system maintenance, the single-cabinet ASOS (SCA) is controlled and monitored from a laptop personal computer (PC) connected to the primary OID connector located at the right side of Circuit Breaker Assembly 7A1A1A3. The laptop PC functions as the technician's operator interface device (OID). Dependent upon the site specific configuration, one or more OID devices may be installed. From the laptop PC, the technician can:

- Access diagnostic program displays that are an integral part of the system
- Change system configuration
- Change output port assignments, parameters, and message formats
- Change communications port characteristics
- Enable and disable communications ports
- Select pulse or tone telephone dialing mode
- Request 2-hour archive of 5-minute observations
- Enable sensors and/or sensor report processing
- Change selected site constants such as date, time, latitude, longitude, and elevation
- Make system log entries
- Reset the system

By using an optional handset in conjunction with the laptop, the technician also can record, play back, and control automated voice messages. Functions available to a user depend on how the user signs onto the system. At the SCA site, the only user might be the technician. As with the standard ASOS, however, four levels of users may sign onto the system: observers, air traffic controllers (ATC's), system managers, and technicians. Additionally, unsigned users also have certain limited capabilities on the system. Some functions are available to more than one type of user. For example, the technician and system manager have the same maintenance capabilities under the MAINT (maintenance) function. The ASOS Ready Reference Guide and Software User's Manual identify the functions granted to each type of user. This section provides control and indicator information for the OID and printer, descriptions of all maintenance pages, and detailed system maintenance operating procedures. Additional information on the other ASOS screens and operating procedures are provided in the ASOS Ready Reference Guide and Software User's Manual.

14.3.2 CONTROLS AND INDICATORS

All controls and indicators in the cabinet are considered to be maintenance-related. Only certified technicians are permitted to open the cabinet. Sensor subsystem controls and indicators are listed and illustrated in the respective chapters of this ASOS Site Technical Manual (STM).

14.3.2.1 **Circuit Breaker Panel 7A1A1A3, Controls and Indicators**. Circuit breakers and their functions are illustrated on figure 14.3.1 and described in table 14.3.1.

14.3.2.2 **VME Rack 7A1A1A2, Controls and Indicators**. VME CCA controls and indicators and their functions are illustrated on figure 14.3.2 and described in table 14.3.2.

14.3.2.2A **RF Modems**. RF data modems provide communications between the SCA and DCP cabinets. Only the Johnson Data rf modem (62828-40506-X) has controls and indicators as shown on figure 14.3.3 and described in table 14.3.3. $

14.3.2.3 **Operator Interface Device (OID), Controls and Indicators**. The OID controls and indicators are described in Chapter 1, Section III.

14.3.2.4 **Auxiliary Box 7A2, Controls and Indicators**. The aux box does not contain controls or indicators but may contain a GTA radio or Codex Modem. Chapter 12 Section 3 contains GTA radio controls and indicators and Chapter 13 Section 3 contains Codex modem controls and indicators.

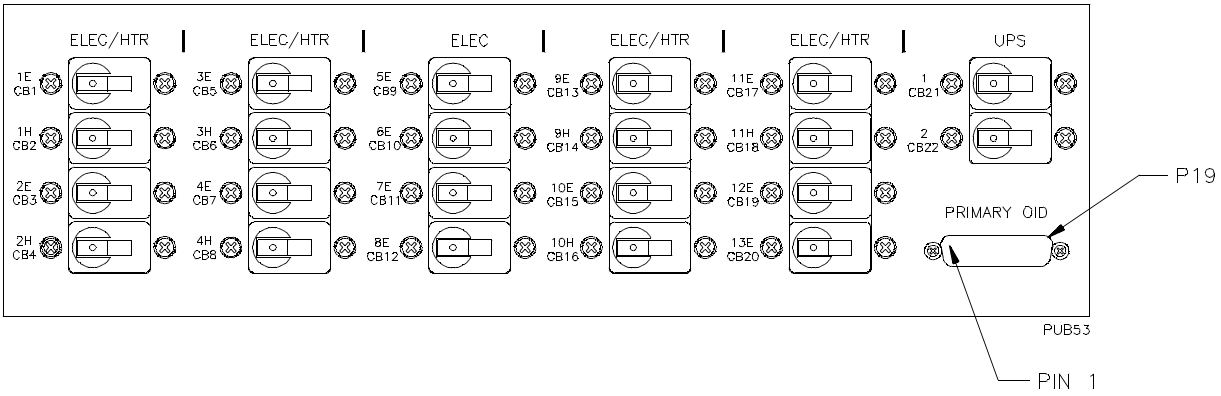

Figure 14.3.1. Circuit Breaker Panel 7A1A1A3, Controls

Table 14.3.1. Circuit Breaker Panel 7A1A1A3 Controls and Indicators

Ref Des	Placard	Type	Function
CB1	ELEC/HTR 1E	Circuit Breaker	CHI
CB2	ELEC/HTR 1H	Circuit Breaker	CHI HTR
CB3	ELEC/HTR 2E	Circuit Breaker	FZR (TS[1])
CB4	ELEC/HTR 2H	Circuit Breaker	FZR HTR (TS HTR[1])
CB5	ELEC/HTR 3E	Circuit Breaker	PWI
CB6	ELEC/HTR 3H	Circuit Breaker	PWI HTR
CB7	ELEC/HTR 4E	Circuit Breaker	SPARE
CB8	ELEC/HTR 4H	Circuit Breaker	TB HTR
CB9	ELEC 5E	Circuit Breaker	WIND
CB10	ELEC 6E	Circuit Breaker	TEMP/DEWPOINT
CB11	ELEC 7E	Circuit Breaker	VIS
CB12	ELEC 8E	Circuit Breaker	SPARE
CB13	ELEC/HTR 9E	Circuit Breaker	TS[1]
CB14	ELEC/HTR 9H	Circuit Breaker	TS HTR[1]
CB15	ELEC/HTR 10E	Circuit Breaker	SPARE
CB16	ELEC/HTR 10H	Circuit Breaker	SPARE
CB17	ELEC/HTR 11E	Circuit Breaker	SPARE
CB18	ELEC/HTR 11H	Circuit Breaker	SPARE
CB19	ELEC/HTR 12E	Circuit Breaker	SPARE
CB20	ELEC/HTR 13E	Circuit Breaker	SPARE
CB21	UPS 1	Circuit Breaker	AC MAIN
CB22	UPS 2	Circuit Breaker	AC to Aux UPS

[1] CB13 and CB14 are used for TS if site configuration includes FZR .

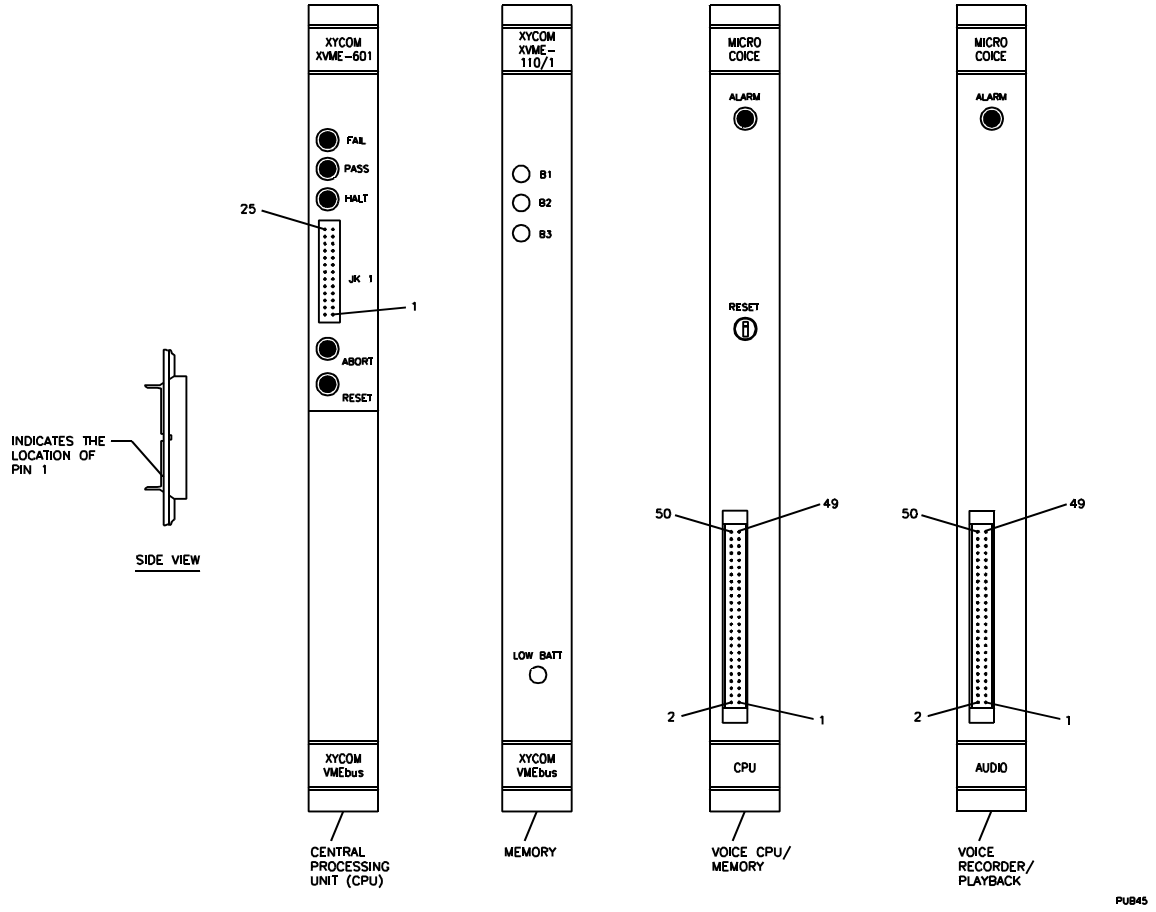

Figure 14.3.2. VME CCA's, Controls and Indicators

Table 14.3.2. VME Rack 7A1A1A2 Controls and Indicators

Ref Des	Placard	Type	Function
A1,A2 (CPU #1, #2)	FAIL	LED (r)	Self-test fail
	PASS	LED (gn)	Self-test pass (FAIL and PASS both light during self-test)
	HALT	LED (amb)	CPU halted
	ABORT	Push switch	Do not use. If inadvertently pressed, then press RESET. Resets CPU and VME bus.
A3 (Memory)	B1	LED (gn)	Bank #1 memory addressed
	B2	LED (gn)	Bank #2 memory addressed
	B3	LED (gn)	Bank #3 memory addressed
	LOW BATT	LED (r)	Memory board backup battery low, replace board
A20 (Voice CPU)	ALARM	LED	Audio CPU failure
	RESET	Push switch	Resets audio CPU only
A21 (Voice Audio Bd)	ALARM	LED	No audio output for 30 to 60 seconds

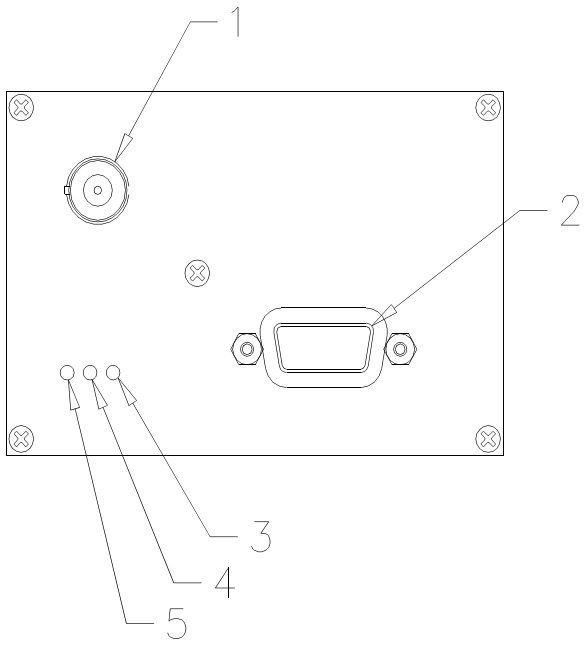

Figure 14.3.3. Johnson Data RF Modem Controls and Indicators

Table 14.3.3. Johnson Data RF Modem Controls and Indicators

Index	Control/ Indicator	Description
1	SMA Connector	RF output (requires SMAM-to-BNCF adapter)
2	HDB-15 Connector	High density 15 pin female power/communications connector (requires adapter cable 62828-42110-10)
3	RX LED (Yellow)	Illuminates when receiving data
4	TX LED (Red)	Illuminates when transmitting data
5	PWR LED (Green) (Flashing)	Illuminates when power is applied Illuminates when setup mode is active

14.3.3 **MAINTENANCE DISPLAY PAGES**

Using either the OID or a laptop PC, the ASOS technician accesses maintenance display pages to monitor the ASOS continuous self-test (CST) program, which runs during normal system operation. The hierarchy of maintenance display pages and the page presentations are illustrated in Chapter 1, Section III.

14.3.4 **OPERATING PROCEDURES**

Chapter 1, Section III contains operating procedures.